

Biotechnology

1) Urey and Miller created the primitive environment in the Spark chamber and used Hydrogen, Ammonia, Methane and Water vapor to simulate the chemical origin of life. The surprising molecule they obtained after the experiment was

- A. Proteins
- B. Lipids
- C. Amino acids
- D. Polysaccharides

2) The most accepted theory of origin of life is

- A. Special creation theory
- B. Theory of abiogenesis
- C. Oparin haldane theory
- D. Theory of spontaneous generation.

3) In mammalian cells rRNA is produced mainly in the

- (A) Endoplasmic reticulum
- (B) Ribosome
- (C) Nucleolus
- (D) Nucleus.

4) HDL is synthesized and secreted from

- (A) Pancreas
- (B) Liver
- (C) Kidney
- (D) Muscle

5) Virus-mediated transfer of cellular genetic material from one bacterial cell to another by means of virus particles is called:

- (A) Transduction
- (B) transposition
- (C) transformation
- (D) transfection

6) The only antibody that crosses placenta is

- A) Inga
- B). IgD
- C). IgG
- D). IgE

7) Mitochondrial DNA is

- (A) Circular double stranded
- (B) Circular single stranded

- (C) Linear double helix
- D) None of these.

- 8) Mendel used the following term to express inheritance of character...
- A) DNA
 - B) Gene
 - C) Factor
 - D) chromosome.

- 9) The terminal sugar present on RBC in blood group "A" is...
- A) Galaxies
 - B) Galactosamine
 - C) Glucose
 - D) Fructose.

- 10) A molecular tool used in assessing genetic diversity among animals is
- A) allonym pattern.
 - B) DNA fingerprinting.
 - C) tryptic peptide map of actin
 - D) DNA Footprinting.

- 11) Nodes of Ranvier are associated with
- A) Myelinated neuron
 - B) Non myelinated neuron
 - C) Lateral ventricle
 - D). Synapses

- 12) Spliceosomes are involved in
- A). cutting of DNA in genetic engineering
 - B). splitting of Pre mRNA
 - C). formation of Nucleosomes
 - D). Prokaryotic DNA synthesis

- 13) ELISA is used to detect HIV but the confirmation of HIV infection is done through
- A). Southern blotting
 - B). Western blotting
 - C). Eastern blotting
 - D) DNA finger printing

- 14) In nuclear magnetic resonance (NMR) spectroscopy, the absorption spectra result by the absorption of one of the following electromagnetic radiation by the spinning nucleus:
- (A) ultraviolet waves
 - (B) infrared waves
 - (C) radiowaves
 - (D) microwaves.

15)) Cystic fibrosis is due to:
(A) defective chloride channel
(B) defective LDL receptor
(C) High levels of HDL
(D) increased dopamine.

16) When flagella are distributed all around a bacterial cell, the arrangement is called
A) polar
B) random
C) peritrichous
D) encapsulated.

17) The fact that viruses are obligate intracellular parasites means that they require a ____
for reproduction.
A) culture dish
B) host cell
C) phenol red broth
D) secondary virus.

18) Organisms that ferment glucose may produce any of the following end products except
A) lactic acid
B) propionic acid
C) alcohol
D) oxygen.

19) Milk lack which of the following vitamins?
(A) Vitamin C
(B) Vitamin A
(C) Vitamin B2
(D) Vitamin K.

20) The percentage of water contained in the body of an individual is less because of
(A) High fat content
(B) Low fat content
(C) High protein content
(D) Low protein content

21) Which one of the following enzymes is obtained from *Thermophilus aquaticus* bacterium which is heat stable and used in PCR at high temperature .
A) DNA polymerase III
B). Endonuclease
C). Taq polymerase
D). DNA gyrase

22) Carbonic anhydrase, the fastest enzyme in the living system is present in

- A). Pancreatic juice
- B). Hepatic cells
- C). RBC
- D). Neuroglia.

23) Genes that are located at identical loci of homologous chromosomes are called:

- (A) alleles
- (B) polygenes
- (C) homozygous
- (D) pseudogenes.

24) Which of the following do not obey the “ Cell Theory”

- A) Viruses
- B) Bacteria
- C) Eukaryotic cell
- D) None of the above

25)) To determine the physical distance between gene on chromosome the unit is...

- A)Centi meter.
- B)Centi Morgan
- C) Mili meter.
- D) Kilo meter.

26) One of the following striking example of Natural selection is

- A. Neck of giraffe
- B. Wing of Bat
- C. Color of Peppered moth
- D. Tail of Rat

27) Duct of Bellini is associated with

- A)Spleen
- B). Liver
- C).Salivary glands
- D). Kidney.

28) Which of the following factors will not allow Hardy- Weinberg principle to operate

- A). Inbreeding
- B). Mutation
- C). Gene pool
- D). Selection

29) One of the following cell can stimulate secondary immune response in the body followed by an infection

- A)T-cell
- B). B-cell
- C). Memory cell

D). Stem cell.

30) Which of the following will be best choice to study the plasma membrane

- A) R.B.C
- B) Fat cell
- C) Neuron
- D) Kidney cell

31) HAT selection is based on:

- (A) TK and HPRT genes
- (B) APRT and ATK genes
- (C) HK and AP genes
- (D) HAT gene.

32) Blood grouping is an example of...

- A) Incomplete dominance
- B) Co-dominance
- C) recessive character
- D) None of the above

33) In *Drosophila melanogaster*, sex is determined by:

- (A) X and Y chromosomes
- (B) X/A ratio
- (C) Ploidy
- (D) Z and W chromosomes

34) On which of the following chromosomes are most of the sex-linked traits carried ?

- A) 13
- B) 18
- C) Y
- D) X.

35) Binding of Mannose 6- P to protein lead to its localization to

- (A) Lysosome
- (B) Golgi body
- (C) Plasma membrane
- (D) Nucleus

36) Which of the following is Ca-binding protein

- (A) Actin
- (B) Myosin
- (C) Troponin
- (D) Tropomyosin.

37) Which of the following shows sporulation along with social behaviors?

- (A) Archebacteria

- (B) Bacillus
- (C) Actinomycetes
- (D) Eubacteria

38) If a part of bacterial genome is doubled it is called as

- (A) Amphidiploid
- (B) Merodiploid
- (C) Endodiploid
- (D) Polyploid

39) Which organelle is involved in conversion of fat to carbohydrate in seeds.

- (A) Glyoxysomes
- (B) Peroxisomes
- (C) Golgi bodies
- (D) Mitochondria

40) Role of carrier between PSII & PSI

- (A) Carries electron from P₆₈₀ to P₇₀₀
- (B) Carries electron from P₇₀₀ to P₆₈₀
- (C) Carries oxygen from P₆₈₀ to P₇₀₀
- (D) Carries proton from P₆₈₀ to P₇₀₀.

Answer Key :

1-C	5- A	9-B	13-B	17- B	21- C	25- B	29- C	33- B	37-B
2-C	6- C	10-B	14- C	18- D	22- C	26- C	30- A	34- D	38-B
3-C	7- A	11- A	15-A	19- A	23- A	27- D	31- A	35- A	39-A
4-B	8- C	12-B	16- C	20- A	24- A	28-B	32-B	36-C	40-A

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